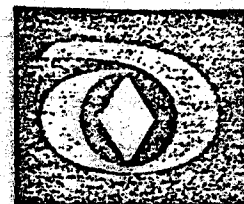


Diamond Shamrock

214 922-2000

Material Safety
Data Sheet



Product Name: **CHROMIC ACID**

DPH 935

CHEMICAL NAME	Chromic Trioxide	EMERGENCY PHONE NO.
SYNONYMS	Chromic Acid, Chromic Anhydride	DATE FORM ISSUED
FORMULA	CrO ₃	

I. HAZARDOUS INGREDIENTS

MATERIAL	TLV(UNITS)	%	MATERIAL	TLV (UNITS)	%
CrO ₃	0.1 mg/m ³	100			

II. PHYSICAL DATA

BOILING POINT 60 mm Hg	Not applicable	FREEZING POINT	Not applicable
SPECIFIC GRAVITY (-1) = 1)	2.7 @ 20° C	VAPOR PRESSURE AT 20° C	Not applicable
VAPOR DENSITY (AIR = 1)	Not applicable	SOLUBILITY IN WATER % BY WT. AT 20°C	Appreciable
PERCENT VOLATILES BY VOLUME	None	EVAPORATION RATE (BUTYL ACETATE =1)	Not applicable
APPEARANCE	Dark Red Solid Flakes or Powder	ODOR	None

III. FIRE AND EXPLOSION HAZARD DATA

FLASH POINT (TEST METHOD)	Not applicable	FLAMMABLE LIMITS IN AIR (% BY VOLUME)	Upper Not applicable
AUTOIGNITION TEMPERATURE	Is Not Combustible		Lower Not applicable
EXTINGUISHING MEDIA	CHROMIC ACID is not combustible. Water, CO ₂ or Dry chemical fire fighting agents are all safe to use on fires in areas where this material is stored.		
SPECIAL FIREFIGHTING PROCEDURES	None		
UNUSUAL FIRE AND EXPLOSION HAZARDS	Chromic Acid is not combustible, but may ignite oxidizable substances.		

IV. HEALTH HAZARD DATA

THRESHOLD LIMIT VALUE	0.1 mg/m ³ as CrO ₃
EFFECTS OF OVEREXPOSURE	If inhaled as dust or mist may irritate respiratory system. It can irritate mucous membranes and skin and cause ulceration of skin wounds. In contact with eyes may cause irritation or conjunctivitis.
EMERGENCY AND FIRST AID PROCEDURES	<p><u>Skin Contact:</u> Flush skin with water. Clothing penetrated with solutions or dust should be removed promptly and washed before re-use.</p> <p><u>Contact With Eyes:</u> Immediately flush eyes with plenty of water for at least 15 minutes. Eyelids should be held apart during irrigation to insure water contact with entire surface of eyes and lids. Call a physician.</p> <p><u>Inhalation:</u> Irrigate nasal passages and mouth with salt water.</p>

V. REACTIVITY DATA

STABILITY	CONDITIONS TO AVOID
Unstable <input type="checkbox"/> Stable <input checked="" type="checkbox"/>	Chromic Acid is hygroscopic. Do not store in humid places. Strongly oxidizing in solution. Avoid contact with oxidizable materials.
INCOMPATIBILITY (Materials To Avoid)	Chromic Acid is a strong oxidizing agent. Avoid contact with organic materials, oils, greases, or any easily oxidizable material.
Hazardous Decomposition Products	None
Hazardous Polymerization	CONDITIONS TO AVOID
May <input checked="" type="checkbox"/> Will Not Occur <input type="checkbox"/>	

VI. SPILL OR LEAK PROCEDURES

STEPS TO BE TAKEN IF MATERIAL IS RELEASED OR SPILLED	Solids should be shoveled up. Area should be flushed with water. Remaining traces should be neutralized with soda ash. Dissolved solids may then be treated by appropriate waste disposal method.
WASTE DISPOSAL METHOD	The hexavalent chromium in solution may be reduced to trivalent chromium by a variety of reducing agents such as sodium bisulfite, sodium sulfite, sulfite dioxide of ferrous sulfate or chloride. The reduced chromium may then be precipitated as the hydrous chromic oxide by neutralizing to a pH of 7.5 with soda ash, caustic soda or lime.

VII. SPECIAL PROTECTION INFORMATION

RESPIRATORY PROTECTION	Dust Respirator (U.S. Bureau of Mines 2175 Model 7100 or American Optical R 2090 Red Devil with mist filter or equivalent).		
VENTILATIONS	LOCAL EXHAUST <input checked="" type="checkbox"/> See TLV	SPECIAL	
	MECHANICAL <input checked="" type="checkbox"/> Listed Above	OTHER	
PROTECTIVE GLOVES	Rubber or Plastic	EYE PROTECTION Safety Goggles	OTHER PROTECTIVE EQUIPMENT Rubber Safety Toed Shoes

VIII. SPECIAL PRECAUTIONS

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING	<p>Do not store in humid air. Do not store in close proximity to easily oxidizable materials (Yellow Label).</p> <p>Avoid contact with skin or eyes. Avoid breathing mists or dusts. Do not take internally.</p>
OTHER PRECAUTIONS	